

Application Serial No. 10/528,792
Response to Office Action dated January 1, 2009

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Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

The Applicant wishes to make the following amendments to the claims of the above patent application:

Listing of claims

1. (currently amended) Device for fixing blades ~~or similar elements to support~~ plates mounted transversely on a rotary shaft and being rotationally integral therewith, the blades projecting beyond the plates, wherein each plate has at least one cut-out made in a ~~[[one]] of the flanks-flank~~ of the plate opening out laterally at the periphery of the plate and embodied ~~such that they can shaped to receive in an interlocking manner and to radially retain a planar additional part acting as complementary flat part of a blade support foot for a blade so that [[the]] a outside lateral face of the flat part forming aof the blade support foot is flush with [[the]] a corresponding outer face of the flank of the plate, and wherein the plates are mounted one after the other in a line on the rotary shaft and tightened axially and jointly packed jointly against each other by axial tightening means allowing a the successive flanks-flank of the a plates plate positioned adjacent to another flank of another plate, opposite to the flanks each of which has at least one cut-out, to be forced against these latter each other flanks and against the flat parts forming of the blade support feet feet of the blades to completely lock them the support feet in their respective cut-outs.~~
2. (currently amended) Device according to claim 1, wherein the axial tightening means can be loosened in a controlled way to allow an axial separation along the rotary shaft between adjacent plates by a given value and the lateral and radial removal of one of the blades from ~~[[its]] the cut-out of the flank of the plate,~~ between two separated adjacent plates.
3. (previously presented) Device according to claim 1, wherein the axial tightening means include an end plate fixed by flanging to one end of the

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rotary shaft and transversely thereto, an axial thrust plate adjacent to the end plate and slidably mounted on the rotary shaft, and means integral with the end plate that exert on the thrust plate an axial effort forcing together the blade support plates held axially at the opposite end of the rotary shaft by a drive plate of the shaft that is transversely integral therewith.

4. (currently amended) Device according to claim 3, wherein the axial tightening means include several screws passing through the end plate, being regularly spaced coaxially to the rotary shaft and secured to the end plate in an axially adjustable position so that ~~their~~ the free ends of the screws are pressed against the adjacent face of the thrust plate to exert upon said thrust plate the specific axial effort to tighten the blade support plates against each other, the screws being able to be loosened and moved transversely at the end plate to allow the axial separation between adjacent blade support plates.
5. (previously presented) Device according to claim 4, wherein the thrust plate includes several regularly spaced through-holes that can be lined up, after a slight loosening of the thrust screws, to face the free ends of the thrust screws by rotating the plate a specific angle value relative to the rotary shaft to allow the plate to be brought axially to a stop relative to the end plate so that the axial separation between adjacent blade support plates appreciably corresponds to the thickness of the thrust plate.
6. (previously presented) Device according to claim 4, wherein each thrust screw is secured to the end plate by a nut and lock-nut assembly situated between the thrust plate and the end plate.
7. (previously presented) Device according to claim 1, wherein the blades are fixed to their respective support plates by being angularly offset relative to each other from one plate to the next so that the blades are distributed in a helical configuration along the rotary shaft.

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8. (previously presented) Device according to claim 1, wherein each plate has three lateral cut-outs for receiving respectively three blades placed at a 120° angle relative to each other.
9. (previously presented) Device according to claim 1, wherein the blade support plates are made rotationally integral with each other by pins transversely integral with the plates, being arranged concentrically to the rotary shaft and engaging respectively in the holes of the adjacent plates arranged concentrically to the rotary shaft.
10. (previously presented) Device according to claim 9, wherein each plate has three regularly spaced pins projecting from the side of the plate opposite to the one having at least one blade and engaging respectively in three holes in the adjacent plate situated on the side opposite to the one having at least one blade of the adjacent plate.
11. (previously presented) Device according to claim 9, wherein the pins of a plate are angularly offset relative to the opposite pins of the adjacent plate so that the blades are angularly offset from each other along the rotary shaft.
12. (previously presented) Device according to claim 9, wherein the axial tightening means include an end plate fixed by flanging to one end of the rotary shaft and transversely thereto, an axial thrust plate adjacent to the end plate and slidably mounted on the rotary shaft, and means integral with the end plate that exert on the thrust plate an axial effort forcing together the blade support plates held axially at the opposite end of the rotary shaft by a drive plate of the shaft that is transversely integral therewith, and wherein the plate adjacent to the drive plate is rotationally integral with this plate by pins integral with the plate, preferably three in-number, arranged concentrically to

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the rotary shaft and projecting from the same side of the plate and engaging respectively in the holes made in the drive plate concentrically thereto.

13. (previously presented) Device according to claim 1, wherein each lateral cut-out of a plate extends in a plane parallel to the flank of the plate, opening out laterally from this flank, and has a lower support edge of the end of support foot of a blade and two circumferentially spaced side edges extending through the plate above the lower edge while forming a specific angle to each other and serving as support respectively for the two opposite sections of the part acting as the support foot of the blade, each lateral edge of a cut-out having a mounting boss that engages in a conjugate recess of the support foot of the blade to radially hold the latter to the respective plate.
14. (previously presented) Device according to claim 13, wherein the lateral edge of a cut-out has a slope that is different from its other lateral edge so as to constitute, with their respective mounting bosses, foolproof means of mounting the blade in its cut-out.
15. (previously presented) Device according to claim 13, wherein the lateral edges of the cut-out diverge toward the outer periphery of the corresponding plate.
16. (previously presented) Device according to claim 13, wherein each cut-out of a plate is made directly in the flank of the plate.
17. (previously presented) Device according to claim 13, wherein each cut-out of a plate is made in a planar part inserted in a socket of conjugate shape made in the flank of the plate the insert being generally U-shaped the side arms of which are pressed, by their opposite outer edges, respectively against the two radial edges of the socket and having at their inner edges respectively

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opposite the two mounting bosses directed toward each other, the two outer edges of the side arms of the insert having respectively two shoulders near the ends of the arms and each resting on one stop edge appreciably perpendicular to the corresponding radial edge of the socket where the insert is seated, the two stop edges being situated near the outer periphery of the plate on the same circumference between the two radial edges of the socket.

18. (previously presented) Device according to claim 17, wherein the two arms of the insert each terminate in a radial tenon seated in the socket and being supported on one side on one radial edge of the socket connecting to the associated stop edge so that the two radial edges facing each other define the opening that opens out into the outer periphery of the corresponding plate.
19. (previously presented) Device according to claim 17, wherein one of the mounting bosses of each insert projects outside the corresponding plate and serves as pivoting means of a blade when it is mounted in the insert.
20. (previously presented) Device according to claim 1, wherein each blade support foot of a plate is held laterally in its cut-out when the plate is separated from the adjacent plate to remove a blade, by a radial strip one end of which is integral with the plate and the opposite free end elastically presses against the lateral face of the support foot of the blade, the adjacent plate having a radial groove to seat the elastic strip.
21. (previously presented) Device according to claim 1, wherein each support foot of a blade of a plate is held laterally in its cut-out, when the plate is separated from the adjacent plate to remove a blade, by a magnet fixed at the bottom of the cut-out.

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22. (previously presented) Device according to claim 17, wherein each insert is removably fixed in its socket on one side by an elastic hold-down tab and the other side by a holding block .
23. (previously presented) Device according to claim 1, wherein the blades project radially outside their respective plates.
24. (previously presented) Agricultural machine fitted with a rotary shaft with plates carrying blades, wherein the blades are fixed to the plates by a device according to claim 1.
25. (new) A device for fixing blades to plates mounted transversely on a rotary shaft and being rotationally integral therewith, the blades projecting beyond the plates, wherein each plate has at least one cut-out made in the flank of the plate opening out laterally at the periphery of the plate and shaped to receive in an interlocking manner and to radially retain a complementary flat part of the blade support foot so that a outside lateral face of the part of the blade support foot is flush with a corresponding outer face of the flank of the plate, wherein the plates are mounted in a line on the rotary shaft and tightened axially and jointly against each other by axial tightening means allowing the successive flanks of the plates opposite to the flanks each of which has at least one cut-out, to be forced against these latter flanks and against the parts of the blade support feet to completely lock the support feet in their respective cut-outs, and wherein each lateral cut-out of the plate extends in a plane parallel to the flank of the plate, opens out laterally from this flank, and has a lower support edge of the end of the support foot of a glad and two circumferentially spaced side edges extending through the plate above the lower edge while forming a specific angle to each other and service as support respectively for the two opposite sections of the part of the blade support foot, each lateral edge of a cut-out having a mounting boss that

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engages in a conjugate recess of the support foot of the blade to radially hold the latter to the respective plate.